



[10191/913]

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

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In re Application of: Hans-Jurgen FISCHER et al. : Examiner: Steven R. Wasylchak
: :
For: METHOD OF PERFORMING A POSTING : :
: Art Unit: 3624
: :
Filed: May 24, 1999 : :
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Serial No.: 09/202,783 : :
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APPEAL BRIEF PURSUANT TO 37 C.F.R. § 1.192(a)

SIR:

On May 22, 2003, the U.S. Patent and Trademark Office (the "PTO") received Appellants' Notice of Appeal (mailed May 20, 2003) from the final rejection of claims 8-17 contained in the Final Office Action issued by the U.S. Patent and Trademark Office (the "PTO") on November 20, 2002 in the above-identified patent application.

In accordance with 37 C.F.R. § 1.192(a), this brief is submitted in triplicate in support of the appeal of the final rejection of claims 8-17. For at least the reasons set forth below, the final rejection of claims 8-17 should be reversed.

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1. REAL PARTY IN INTEREST

The real party in interest in the present appeal is Robert Bosch GmbH,
Postfach 30 02 20, D-70442 Stuttgart, Federal Republic of Germany. Robert Bosch

GmbH is the assignee of the entire right, title and interest in the present application.

2. **RELATED APPEALS AND INTERFERENCES**

There are no interferences or other appeals related to the present application.

3. **STATUS OF CLAIMS**

Claims 8-17 stand rejected under 35 U.S.C. § 102(b) as being obvious over U.S. Patent No. 5,485,520 to Chaum et al. (the "Chaum patent").

Appellants appeal from the final rejection of claims 8-17. A copy of all of the pending claims is attached hereto in the Appendix.

4. **STATUS OF AMENDMENTS**

A Response After Final was submitted in the present application; however, the Response did not include any amendments.

5. **SUMMARY OF THE INVENTION**

The present invention relates to performing a posting to a mobile intelligent storage device, for example, an IC card, with the help of a terminal which has a secure wireless communication with a computer. Specification, page 1, lines 1-4. Referring to Fig. 1, in one example embodiment, a roadside computer station 1 communicates with a moving vehicle 3 via a radio beacon 2. Specification, page 6, lines 7-8. The moving vehicle 3 is equipped with an on-board terminal OBU whose fee credit is stored on an integrated circuit card ICC. Specification, page 6, lines 9-11. When driving through a particular communication range, the road toll is to be deducted from the credit on IC card ICC, i.e., posted to the credit account of IC card ICC. Specification, page 6, lines 13-16.

In the example embodiment, the communication sequence between the various devices is as follows. An initiation signal is transmitted via radio beacon 2. Specification, page 6, lines 18-19. In response thereto, the terminal OBU generates a service request signal. Specification, page 6, lines 18-20. The radio beacon 2 then generates a debit order signal which is received by terminal OBU, and then transmitted by terminal OBU to IC card ICC as a debit command. Specification, page 6, lines 20-22. After the debit posting has been performed, the IC card ICC generates a receipt acknowledgment signal, which is transmitted from terminal OBU to radio beacon 2 on the basis of an initiation signal of

radio beacon 2. Specification, page 6, lines 22-25. Proper receipt of the acknowledgment signal is then confirmed (acknowledged) by radio beacon 2, whereupon terminal OBU transmits the acknowledgment signal to the IC card to complete a transaction record, and the IC card ICC makes the information available for the next service request by terminal OBU. Specification, page 6, lines 26-31.

The time-critical part of the communication sequence is from the creation of the debit order by the radio beacon 2 until transmission of the acknowledgment signal to terminal OBU. Specification, page 6, lines 33-35. This communication, which is susceptible to interference, is executed within an extremely short period of time according to the present invention, due to the fact that a MACRO signal is relayed from terminal OBU to IC card ICC according to Figure 2. Specification, page 6, line 37 - page 7, line 4. The MACRO signal contains a selection signal for application APPL (posting), a posting triggering signal CMD, posting amount B, its own signature S1 and a randomly generated number R2. Specification, page 7, lines 4-7. Furthermore, the MACRO signal may also contain a provisional transaction data record L for creating log book information in IC card ICC. Specification, page 7, lines 7-9. Transaction data record L and posting amount B together form a posting data record. Specification, page 7, lines 10-11.

The signature S1 is preferably encoded using a first data word R1 which was previously transmitted from IC card ICC to terminal OBU in the form of a time signal or a random number. Specification, page 7, lines 13-16.

IC card ICC selects the application according to APPL, checks signal S1 and posting amount B, calculates and writes the new money value in the money account data file and log book information L, thereby performing the posting. Specification, page 7, lines 18-21. Furthermore, IC card ICC calculates a second identifier with the help of its own signature S2 using second word R2 generated by terminal OBU. Specification, page 7, lines 21-24. The second data word may be, for example, a random number or time information. Specification, page 7, lines 24-25.

After these operations have been performed, the IC card ICC transmits an acknowledgment signal and the second identifier with signature S2 to terminal OBU. Specification, page 7, lines 27-29. The acknowledgment signal is sent from terminal OBU to computer 1, which checks and acknowledges the authenticity of IC card ICC. Specification, page 7, lines 29-32.

The provisional transaction data record in IC card ICC is completed by a confirmation signal from computer 1 for receipt of the acknowledgment signal for the posting performed. Specification, page 7, lines 34-36. The acknowledgment signal from computer 1 can be used to transfer the transaction data record stored in the IC card temporarily to a log book data file.

6. **ISSUE**

Whether claims 8-17, which stand rejected under 35 U.S.C. § 102(b), are patentable over the Chaum patent.

7. **GROUPING OF CLAIMS**

Claims 8-17 stand or fall together.

8. **ARGUMENTS**

Claims 8-17 stand rejected under 35 U.S.C. § 102(b) as being anticipated by the Chaum patent. It is respectfully submitted that the Chaum patent does not anticipate any of claims 8-17, for at least the following reasons.

Claim 8 recites the following:

before an interrupt-sensitive time period, transmitting a first data word of the at least one data word from the storage device to the terminal, the first data word being generated for the mutual dynamic authenticity test;

during the interrupt-sensitive time period, transmitting a particular signal from the terminal to the storage device, the particular signal including a posting triggering signal, a posting data record, an identifier generated using the first data word and a second data word of the at least one data word generated by one of the computer and the terminal;

checking, by the storage device, the identifier, using the storage device;

posting, by the storage device, the debit information as a function of the posting data record

generating, by the storage device, a further identifier as a function of the second data word;

transmitting, by the storage device, a confirmation signal and the further identifier to the computer via the terminal, the confirmation signal being provided to indicate that

the debit information has been posted, the confirmation signal being transmitted from the terminal to the computer one of during and outside of the interrupt-sensitive time period.

Thus, claim 8 recites a particular exchange of information between the terminal and the storage device, and a particular use of the exchanged information. In particular, before an interrupt-sensitive time period, a first data word (e.g., R1) is transmitted from the storage device (e.g., ICC) to the terminal (e.g., OBU). During the interrupt-sensitive time period, a signal is transmitted from the terminal to the storage device which includes not only an identifier (e.g., S1) generated as a function of the first data word (e.g., R1), but also a posting trigger signal (e.g., CMD), a posting data record (e.g., L, B), and a second data word (e.g., R2) which is generated by either the computer or the terminal. The storage device checks the identifier (e.g., S1), posts the data record (e.g., L, B) and generates a further identifier (e.g., S2) using the second data word (e.g., R2). A confirmation signal and the further identifier (e.g., S2) are then transmitted by the storage device (e.g., ICC) to the terminal (e.g., OBU).

As regards Appellants' terminal, storage device and computer, the Examiner apparently relies on the inter-vehicle unit IVU, the smart card, and the roadside collection station RCS (respectively), described in the Chaum patent. Respectfully, while the portions of the Chaum patent to which the Examiner has cited describe communication exchanges between the inter-vehicle unit IVU and the roadside collection stations RCS, these sections do not describe communication exchanges (if any) between the IVU and the smart card. As set forth above, claim 8 recites specific communication exchanges between the terminal and the storage device, and also recites the uses of some of the information exchanged. The Chaum patent gives no hint as to communication exchanges (if any) between the IVU and the smart card.

The Examiner contends that Appellants' recited communication exchanges and use of information therefrom are inherent. In particular, the Examiner contends not only that performing a "handshake" between the IVU and the smart card is inherent, but also, the exchange of the particular information recited, is inherent. Appellants respectfully disagree with the Examiner. As an initial matter, a "handshake" between components (e.g., the IVU and the smart card) is neither necessary nor does it flow from the disclosure of the Chaum patent. Moreover, even if it were necessary, the

specific recited information exchanged between the components is neither necessary nor does it flow from the disclosure of the Chaum patent. As indicated above, claim 8 recites transmission of a signal (e.g., MACRO) from the terminal to the storage device that includes not only an identifier (e.g., S1) generated as a function of the first data word (e.g., R1), but also a posting trigger signal (e.g., CMD), a posting data record (e.g., L, B), and a second data word (e.g., R2) which is generated by either the computer or the terminal. As discussed above, in accordance with the example embodiment of the present invention, the time-critical part of the communication, which is susceptible to interference, is executed in an extremely short period of time due to the fact that a MACRO signal (including S1, CMD, L, B and R2) is relayed from the terminal OBU to the IC card ICC. These features are not disclosed in the Chaum patent.

In view of foregoing, it is respectfully submitted that the Chaum patent does not anticipate claim 8. Claims 9-17 depend from claim 8, accordingly, the arguments presented above apply equally to claims 9-17. It is submitted that the final rejection of claims 8-17 under 35 U.S.C. § 102(b) in view of the Chaum patent should be reversed.

9. **CONCLUSION**



For at least the reasons indicated above, Appellants respectfully submit that the Chaum patent does not anticipate Appellants' invention as recited in the claims of the

above-identified application. It is respectfully submitted that the invention recited in the claims of the present application is new, non-obvious and useful. Reversal of the Examiner's rejection of the claims is therefore respectfully requested.

Respectfully submitted,

Dated: 20 Aug 1988

By: _____

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APPENDIX

8. A method for posting debit information to a mobile intelligent storage device using a terminal, the terminal being in a wireless, secure communication with a computer, the method comprising the steps of:

performing a mutual dynamic authenticity test between the computer, the terminal and the storage device using at least one data word, the at least one data word constantly changing;

generating, by one of the computer and the terminal, the debit information;

processing, by the storage device, the debit information;

before an interrupt-sensitive time period, transmitting a first data word of the at least one data word from the storage device to the terminal, the first data word being generated for the mutual dynamic authenticity test;

during the interrupt-sensitive time period, transmitting a particular signal from the terminal to the storage device, the particular signal including a posting triggering signal, a posting data record, an identifier generated using the first data word and a second data word of the at least one data word generated by one of the computer and the terminal;

checking, by the storage device, the identifier, using the storage device;

posting, by the storage device, the debit information as a function of the posting data record

generating, by the storage device, a further identifier as a function of the second data word;

transmitting, by the storage device, a confirmation signal and the further identifier to the computer via the terminal, the confirmation signal being provided to indicate that the debit information has been posted, the confirmation signal being transmitted from the terminal to the computer one of during and outside of the interrupt-sensitive time period.

9. The method according to claim 8, further comprising the step of:

after the confirmation signal is transmitted, receiving an acknowledgment signal for the posted debit information from the computer by the terminal.

10. The method according to claim 8, wherein the mobile intelligent storage device

includes an IC card.

11. The method according to claim 8, wherein the wireless secure communication is performed via a computer station.

12. The method according to claim 8, wherein the posting data record includes a transaction data record for creating a log book entry in the storage device.

13. The method according to claim 12, wherein the transaction data record is supplemented by an acknowledgment signal which is transmitted outside of the interrupt-sensitive time period.

14. The method according to claim 12, wherein the storage device is formed using a plurality of page records for storing the debit information, and the method further comprising the steps of:

temporally storing the transaction data record during the interrupt-sensitive time period on a particular page record of the plurality of page records; and

outside of the interrupt-sensitive time period, transmitting the transaction data record to a log book data file.

15. The method according to claim 14, further comprising the step of:

until the transmitting of the transaction data record to the log book data file is performed, blocking the storage device for posting the debit information.

16. The method according to claim 8, wherein the method is utilized to post use fee debit information.

17. The method according to claim 16, wherein the method is utilized to collect a toll for a motor vehicle.